



73RD CAIRO CLIMATE TALK REPORT

Biogas Production: A growing demand and a growing potential

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On the 20th of April 2021 the Cairo Climate Talks hosted the first talk for 2021. The 73rd CCT titled “Biogas Production: a growing demand and a growing potential” started off with a conversation about this promising comprehensive solution that is yet to be fully explored in the Egyptian context. Energy and development experts came together to discuss the opportunities that biogas production presents in many rural areas around Egypt as well as ways to encourage further biogas production.

Philippe Maupai, Head of the Science Department at the Embassy of the Federal Republic of Germany welcomed the guests and shared the role that biomass in general and biogas specifically have been playing in Germany's energy transition, pointing out that biogas has provided 28.7 kWh in 2020. “Egypt with its important agricultural sector has a huge potential for developing biogas, and especially decentralized biogas productions” he added. On his part, Dr. Aly Abu Sena, Minister of Environment Assistant for Projects gave an overview of the ministry's efforts in promoting and facilitating the use of bioenergy and biogas in energy production through establishing the Bioenergy Foundation for Sustainable Development.

The foundation was a result of a collaboration between the UNDP and the Egyptian Ministry of Environment and aims to adapt solutions found globally to the local context in rural areas. Dr. Aly assured that promoting biogas is on top of the Egyptian government's agenda through the “Decent Life” initiative which targets around 1500 villages that are considered in high need. Biogas digestors were chosen to be one of the services provided in said villages, for the multitude of benefits they provide for the community.

The Bioenergy Foundation for Sustainable Development is providing technical and financial assistance and has so far collaborated with the campaign on establishing 1600 biogas units. He expanded on the foundation's work: “The foundation is also working on large scale units, supporting the ministry of environment to create a waste-to-energy program targeting big sized units”. He continued to stress on the importance of collaboration since the foundation is a result of a partnership between the government, NGOs, the banking sector and international partners.

IN COOPERATION WITH UNDP THE EGYPTIAN GOVERNMENT HAS SUPPORTED 1600 BIOGAS UNITS IN RURAL AREAS

Marwan Rasmy, the moderator of the talk and the Coordinator of Content and Development at Greenish opened the discussion with a brief explanation how organic household and agricultural waste is turned to biogas which can be used in heating and cooking among other uses. When asked about the value of biogas projects and how they have become an asset in rural communities in Egypt, Ghada Ahmadein the Technical Advisor for the Small Grants Programme at the UNDP, talked about the two prominent projects implemented since 2013 in the governorates of Fayoum and Assiut. NGOs were funded in assigned villages to promote the biogas technology in other villages and governorates. In Assiut, NGOs organized seminars and field visits to educate farmers about biogas technology and promote its use, she revealed “they gathered more than 2000 requests from farmers to install biogas units in their lands”. In Fayoum, 20 young women were trained to conduct more than 3000 door-to-door visits to talk to women in villages for education and promotion and created a list of requests. In a following phase, NGOs were trained to install biogas units. Ghada shared that since 2017, 3 additional projects have been implemented and include the same components of awareness, capacity building of engineers, and installation of biogas units. They have also succeeded in establishing a partnership with the National Council of Women to further involvement of women in those projects given the role they have in providing energy for their households.

Menna Gomaa, Director of ESG Engagement and Corporate Reporting at Masader, explained how agriculture poses a strain on resources such as water and energy. She went on to highlight how biogas production contributes to several SDGs including poverty, affordable clean energy and industry innovation and infrastructure, “biogas in brief, is an energy sector meeting national sustainable development requirement, and it maximizes efficient use of various traditional renewable

resources, contributing to our economic growth, achieving social justice, and of course preserving the environment” she added. Addressing the topic of stakeholder engagement, Menna called it a vital key to a successful renewable energy project in order to fulfill the real needs of the community. Stakeholder engagement planning imagines an ideal communication scenario. “Stakeholder engagement doesn’t represent information dissemination from one side only. It’s rather a two-way communication between citizens, the government, and all other involved stakeholders” she clarified. Menna stressed on the importance of special engagement efforts towards groups that might be disproportionately dealing with the consequences of the inaccessibility of energy, to ensure their representation in consultation. She continued to explain that agriculture is the biggest employer of women in Egypt, and their involvement should reflect their role in agricultural activities in rural areas where biogas projects are implemented.

Expanding on the work of the Bioenergy Foundation for Sustainable Development, Engineer Mahmoud El Tohamy explained that the foundation focuses on raising awareness between farmers about the technology as well as the value of available resources such as sludge and manure. In addition to farmers, the foundation trains local engineers for the installation and operation of the biogas units. After the capacity building phase is over, the foundation connects farmers and engineers to companies working in the field of biogas. In addition to field work, the Bioenergy Foundation is developing a national strategy for large scale biogas promotion and have already developed a plan working with the Giza Zoo to use animal manure for energy production.

CAPACITY BUILDING WORKSHOPS IN ACCORDANCE WITH LOCAL COMMUNITIES' NEEDS IS KEY FOR BIOGAS PROJECTS' SUCCESS

Magaly Baltran, Project Manager at Biosolar Energy, highlighted the similarities between Egypt and Bolivia, when she pointed out that working on biogas production for her project, she had conduct surveys with farmers in rural areas. She also mentioned that to her surprise, since a GIZ project had been implemented, a lot of the farmers were aware of the technology. But that also meant that some of them had concerns regarding the maintenance and operation of the biogas units. Magaly in cooperation with her university, developed capacity building for the farmers in rural areas to equip them with the skills needed for its maintenance in addition to explaining the long-term economic benefits. Following these capacity building efforts, farmers were approaching Magaly and her team to use the technology. One farmer she mentioned, had accumulated environmental sanctions due to his farm’s wastewater polluting a nearby river, and had decided that a biogas unit is an investment that also spares him these sanctions.

Moving on to the evaluation process of these projects, Menna emphasized the importance of mitigating possible negative environmental and social impacts. These impacts include beneficiary dissatisfaction, and health and safety risks during construction and operation. Through identifying those risks and specific roles for each stakeholder that can either technically or strategically mitigate the identified risk. Ghada agreed that the process of identifying those risks is essential, however she added that since a lot of those projects are carried out in partnership with NGOs that might have limited capacities, the role of the Bioenergy Foundation and the Ministry of Environment is essential to offset this gap. She also mentioned that when it comes to financing these projects, they have found that the beneficiary contributions guarantee ownership and hence more involvement in the upkeep and maintenance of the units.

Wrapping up the discussion, Marwan echoed the sentiment of the speakers that biogas technology can be extremely rewarding in rural areas due to the environmental benefits of using the waste, the produced gas, the compost byproduct, and uplifting the community through capacity building and energy autonomy. Cairo Climate Talks will also be exploring more energy, social and environmental issues in 2021 in collaboration with our local and international partners.

GHADA AHMADEIN

TECHNICAL
COORDINATOR SMALL
GRANTS PROGRAMME
UNDP

Ghada Ahmadein is the Program Assistant of the GEF Small Grants Programme in Egypt since 2010. She is a communication and networking specialist with experience and professional practice of over 18 years in the field of environment and in dealing with non-governmental organizations active in the fields of environment and development.

Mahmoud Eltohamy is originally a civil engineer who by passion and belief turned to a biogas engineer since he graduated in 2013, and since then he has been working in the Ministry of Environment on several projects to disseminate Biogas technologies in rural Egypt. His efforts revolved around technical support and technical training to biogas professionals and technicians. Since 2017 Mahmoud is the on- and off-site Biogas Engineer for the Bioenergy Foundation where he manages and further develops biogas projects, as well as is responsible for technical reviewing of the units.

MAHMOUD EL TOHAMY

BIOENERGY FOUNDATION
FOR SUSTAINABLE
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MAGALY BELTRAN

PROJECT MANAGER
BIOSOLAR ENERGY

Magaly Beltran holds a Master's Degree in Renewable energies technologies from San Simon University in Bolivia, this program was supported by the KTH institute from Sweden. Magaly has worked for around 10 years in the field of sustainability and green energies as project manager and mitigation to climate change consultant at Biosolar Energy School and Plurinational Authority of Mother Earth.

Menna Gomaa has been the ESG Engagement and Corporate Reporting Director at Masader since 2017. Masader is a corporate sustainability consulting firm highly committed to creating sustainable and long-term solutions for its clients and has led key environmental & social, waste, and energy projects in Egypt and MENA region over recent years. Menna has vast experience in communication and corporate responsibility where the core of her work is to plan, implement and certify corporates' sustainability efforts and enhance cooperation amongst stakeholders to ensure the highest positive impact of every project on ESG requirements.

MENNA GOMAA

DIRECTOR OF
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BACKGROUND INFORMATION:

Cairo Climate Talks are conceived, organized and hosted as a cooperation between the German Embassy in Cairo, the Egyptian Ministry of Environment, the German Academic Exchange Service (DAAD) and the German Corporation for International Cooperation (GIZ).



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